

**CLAIM SUMMARY DOCUMENT:**

1. (Currently Amended) A cooling-air cooler (10, 22, 28) for a gas-turbine plant (29) of a power plant (30, 44), in which cooling-air cooler (10, 22, 28), comprising:

~~first means (13, 14, 15) for spraying water into the cooling-air flow and second means (16, 17, 18, 23) for generating steam are arranged in a pressure vessel (11), through which the cooling-air to be cooled flows, between a cooling-air inlet (12) and a cooling-air outlet (20) in the cooling-air flow, characterized in that a water separator (19) is provided on the cooling-air side in the direction of flow downstream of the first means (13, 14, 15) a pressure vessel extending along a longitudinal axis from a first end to a second end;~~

a cooling-air inlet at said first end of said pressure vessel and a cooling-air outlet at said second end of said pressure vessel, such that cooling air can enter said pressure vessel through said cooling-air inlet, flow through said pressure vessel along said axis as a cooling-air flow and exit said pressure vessel through said cooling-air outlet;

within said pressure vessel means for spraying water into the cooling-air flow that flows through said pressure vessel from said cooling-air inlet to said cooling-air outlet, whereby said water-spraying means comprise a plurality of nozzles oriented in parallel to said longitudinal axis such that water is sprayed from said nozzles in the direction of said cooling-air flow;

within said pressure vessel heat exchanging means which are arranged in said cooling-air flow; and

within said pressure vessel a water separator arranged in said cooling-air flow between said water-spraying means and said cooling-air outlet .

2. (Currently Amended) The cooling-air cooler as claimed in claim 1, ~~characterized in that the first means (13, 14, 15)~~ wherein said water spraying means are arranged directly downstream of the cooling-air inlet (12), ~~in that the said~~ water separator (19) is arranged directly upstream of the cooling-air outlet (20), and ~~in that the second means (16, 17, 18, 23)~~ said heat exchanging means are arranged between said water spraying means ~~the first means (13, 14, 15)~~ and the water separator (19).

3. (Currently Amended) The cooling-air cooler as claimed in ~~either of claims claim 1 and 2,~~ wherein said heat exchanging means ~~characterized in that the second means (16, 17, 18, 23)~~ comprise a plurality of spiral tubes (17) through which water or steam flows and which extend in the form of spirals along said longitudinal axis ~~an axis (53) lying parallel to the cooling-air side flow direction.~~

Claims 4-6 (Withdrawn).

7. (Currently Amended) The cooling-air cooler as claimed in ~~one of claims claim~~  
1 to 6, characterized in that the wherein said cooling air flows perpendicularly through the  
from said pressure vessel from said cooling-air inlet to said cooling-air outlet in a single  
pass, and

a fluid flows through said heat exchanging means in counterflow with regard to said  
cooling-air flow (11) from top to bottom in a single pass, and in that flow occurs through  
the second means (16, 17, 18, 23) in counterflow from bottom to top.

Claims 8-16 (Withdrawn).

17. (New) A cooling air cooler for a gas turbine plant of a power plant,  
comprising:

a pressure vessel having a cooling air inlet and a cooling air outlet through which  
cooling air flows;

means for spraying water into the cooling air flow, said water spraying means being  
disposed in said pressure vessel, and comprising a plurality of nozzles oriented in parallel  
to said cooling-air flow such that water is sprayed from said nozzles in the direction of said  
cooling-air flow;

heat exchanging means disposed in the pressure vessel; and

a water separator disposed downstream of the flow from said water spraying means.